U. S. DEPARTMENT OF TRANSPORTATION OFFICE OF THE SECRETARY WASHINGTON, D. C. 20590

STATEMENT OF ALAN S. BOYD, SECRETARY OF TRANSPORTATION, BEFORE THE SUBCOMMITTEE ON COMMUNICATIONS AND POWER OF THE INTERSTATE AND FOREIGN COMMERCE COMMITTEE OF THE HOUSE OF REPRESENTATIVES ON S. 1166, H. R. 6551, H. R. 13936, AND RELATED BILLS, WEDNESDAY, DECEMBER 6, 1967, 10:00 A. M., Room 2123, Rayburn Building.

Mr. Chairman, Members of the Committee:

I am pleased to have the opportunity this morning to present the views of the Department of Transportation on legislation which is designed to enhance the safe operation of the thousands of miles of pipelines which transport natural and other flammable gases, and nonflammable hazardous gases to all corners of the Nation. It is our belief that the American public deserves the kind of protection contemplated by such legislation and that action should be taken by this Congress to create Federal authority to establish the necessary safety standards.

In his message of February 16, 1967, on protection of the American consumer, President Johnson called for legislation to reduce the potential hazards of gas pipeline failures. To this end, S. 1166 was introduced in the Senate on March 3, 1967. As you know, the bills which you are now considering differ in many particulars from S. 1166 as it was originally introduced. S. 1166 as passed by the Senate is a good bill. However, we believe it can be substantially improved and my primary purpose here today is to suggest the improvements I believe necessary.

You are aware, I know, that the legislation creating the Department of Transportation centered in one body for the first time Federal regulatory authority over the safety of virtually every mode of transportation. This consolidation came at a time in which the health, safety, and well-being of the individual citizen, in the most abundant society in the world, is a major goal. Because transportation is synonymous with mobility, the only practicable bases on which to predicate safety regulation in this field is through Federal regulation. Authority now exists in the Department of Transportation to significantly improve the public safety as it is affected by transportation by private auto, bus, truck, railroad train, airplane, ship, and pipelines which carry products other than gas and water. It is apparent that the only significant mode of transportation which is presently beyond the reach of effective, comprehensive safety regulation is the transportation of gases by pipeline. The anomaly of this exception is more evident when we realize that the Department of Transportation now exercises safety regulation over flammable and other hazardous gases moving other than by pipeline and over pipeline movements of many commodities, including petroleum.

The concept of regulation of transportation safety on a national basis is three-quarters of a century old and dates from the first Federal railroad safety appliance act late in the nineteenth century. While we are convinced that the safety record in the gas industry has been a relatively good one, there are a number of reasons why this industry should be included among the modes of transportation subject to effective, uniform and comprehensive safety regulation.

There are now over 800,000 miles of gas pipeline in the United States including approximately 63,000 miles of gathering lines, 224,000 miles of transmission lines, and 536,000 miles of distribution lines. These lines range in diameter from less than 1 inch to 42 inches with 48-inch lines under consideration. They vary in condition from old, unprotected lines to new, well-protected lines. They differ in function from low-pressure distribution lines operated at one-fourth pounds per square inch to high-pressure transmission lines operated at 1,300 pounds per square inch, which is equivalent to a force of over 93 tons pushing against the pipeline wall over every square foot. Thus, any failure of a pipe may cause large amounts of gas to be released to the atmosphere in a relatively short period of time. Any gas thus escaping which is mixed with air may ignite; the area affected can be very large depending on such variables as the gas pressure, size of the pipe and the size of the break. When it burns, the gas can reach temperatures up to 2,500° F.

In addition to such factors as the diameter and pressure of the pipe, population density has an important bearing on the potential dangers associated with a pipeline failure. As our cities and towns expand, the problem of population density near transmission, distribution and gathering lines grows more acute, since much of this pipe was laid to specifications designed for unpopulated areas. The danger and extent of injury or death is patently greater in the more densely populated areas.

Still another factor contributing to the risk of pipeline failure and the danger of death or injury is the age of some of the pipeline throughout the country. This is not because age in itself causes deterioration of the pipe, but because older pipe was not designed, constructed, or protected as well from the effects of corrosion and other deterioration as is newer pipe.

A study made by the Federal Power Commission and released in April 1966 deals with the safety of the 150,000 miles of transmission lines under the Commission's jurisdiction. The companies reported 64 deaths and 225 serious injuries between January 1950 and August 1965, as a result of transmission system failures. In addition, they reported around 1,200 operational failures, or about one every five days. Roughly the same number of failures during testing were also reported. In most cases the gas which escaped as a result of these failures did not ignite. The danger of injury and death is not as great in the case of these transmission lines which are often located away from areas of population density. When a transmission line failure occurs in a populated locale and ignition follows, the resulting explosion can be highly destructive. For example, the rupture and explosion at Natchitoches, Louisiana, in March 1965 gutted a 13-acre area, killed 17 people, burned five houses and melted cars and rocks in the vicinity.

Problems of the distribution lines are more complicated. Distribution systems have been in existence for many years and much of the original pipe is still in use even though it is now 30 or 40 years old. In some instances, it may be twice as old as that. There is no readily available information concerning past accidents in distribution systems as there is with transmission pipelines. However, in the first few months of this year, there were several major accidents in distribution systems. On January 13, there was a fire which engulfed an area equivalent to an entire block in Queens, Long Island, in which seven people were injured and 19 families left homeless. On February 19, there was an explosion in a rehearsal hall in South Milwaukee, Wisconsin, where 250 people had been located just 20 minutes prior to the explosion, 14 people were injured. Simple chance and the heroic action of the police prevented loss of life in both these incidents.

On February 27, in Hastings, New York, one person was killed and 15 injured and 35 families left homeless. On March 14, a crack in a main located in Logansport, Indiana, caused a blow-up leaving eight injured. Another recent accident occurred in Fort Worth, Texas, where a gas main failed during a test, resulting in a blow-up in which 12 were injured. The most recent incident of which we are aware occurred less than a month ago, on November 11, in St. Louis. Fortunately, the office building, which reportedly was leveled, was unoccupied since the blast occurred at night. However, records and documents were destroyed and two passersby were slightly injured.

How many major accidents have occurred in past years and how many minor ones this year is pure conjecture, but this emphasizes the need for safety jurisdiction over distribution lines to help prevent accidents of the type I have related.

I would like to make clear at this point that my statement is not an indictment of the natural gas industry. On the contrary, its record is good. For almost two decades the industry has supported a self-regulating safety unit now known as the United States of America Standards Institute -- B31.8 Code Committee. The group developing these particular standards is comprised of technicians from the gas industry, allied supply industries, along with representatives from the academic profession and from government. This group has sought to insure the adaptation of technological advances to the transportation of natural gas.

I believe that they have performed a meritorious and public spirited task over these past years. A counterpart in other industries is difficult to find. Few industries have devoted the time and attention to safety procedures as has this one.

Yet pipeline transportation of the commodity in which this industry deals is an inherently dangerous one. The examples of pipeline accidents which I described to you a few moments ago gives us some idea of the magnitude of the destruction which results from such accidents. The steadily and rapidly increasing use of gas as a power source and the increasing population densities where gas is used presents, in my judgment, a compelling and convincing case for assuring that additional measures to protect the public are taken. Clear authority to establish comprehensive safety standards must be enacted; we believe that the exercise of such authority by the Federal Government will assure the best framework within which the standards can be developed and implemented.

For I do not believe that we can provide such protection through the enactment of the present Code. I have attached to my statement a list of some of the major areas where the Code would not provide the kind of protection which we believe is essential.

Let me cite what I consider to be a major shortcoming of the Code -it does not provide for a systematic testing or evaluation of pipe
already in the ground. Only some pipe whose operating capacity
will be upgraded is subjected to such testing. Yet we know that
there are new techniques for testing and evaluating which can in
some instances provide far greater assurance that existing pipe does
not constitute a threat to the life and health of those who may be
exposed to it.

Let me make one thing clear at this point. At the same time, however, much of the Code and the expertise and experience which produced it will be of great usefulness in developing the regulations which would be issued by the Secretary of Transportation. I am particularly referring to those portions of the Code related to design, construction and installation of pipe and the welding processes by which it is connected.

It is my assumption that the industry membership of the advisory committee called for in this bill will be heavily comprised of the present membership of the Code committee or others with similar experience.

The bills, S. 1166 and H. R. 13936, would authorize the Secretary of Transportation to establish minimum Federal safety standards applicable to gas transportation and pipeline facilities. These standards would apply to companies engaged in activities in and affecting interstate or foreign commerce and would extend to design, installation, inspection, testing, construction, extension, operation, replacement, and maintenance. The intended reach of the bill would be to all gathering, transmission, and distribution operations in the Nation.

The facilities and activities subject to regulation would be those relating to natural gas, other flammable gases, and nonflammable hazardous gases. The history of S. 1166 in the Senate is not clear on the question of what is meant by nonflammable hazardous gases. It would be our interpretation that this is intended to cover toxic and corrosive gases, chlorine, for example (whether or not these gases are currently moving by pipeline), but not such things as steam, which is often carried by pipe in intra-urban situations to heat large office buildings.

Under the procedures set up in either bill, the Secretary would follow the rule-making procedures of the Administrative Procedure Act in developing the standards. While S. 1166, and presumably H. R. 13936, does not contemplate evidentiary hearings, the bills provide that interested persons will have the opportunity to present arguments orally and through witnesses.

There is a limited Federal preemption contained in each bill extending to those transmission lines which are regulated for economic purposes by the Federal Power Commission. Otherwise, the States are free to exercise their particular knowledge of the needs of their citizens by establishing additional or more stringent standards, provided they are not inconsistent with the Federal minimum standards.

In fact, both bills provide for a very significant role for the States in the development, adoption and enforcement of safety standards. The bills contemplate that the States would enter into agreements with the Secretary under which each State would undertake to adopt the Federal minimum standards as its own; be willing and able to impose the same sanctions for violations as would the Federal Government; adopt a program designed to assure compliance; and cooperate in a system of Federal monitoring. The State executing and implementing such an agreement would be exempt from the Federal standards.

Even if a State is unable to give all of the assurances which I have described, it may nevertheless enter into an agreement whereby it agrees to undertake certain compliance activities on behalf of the Secretary, agreeing to notify him promptly of any violations which it might uncover. The Secretary, in recognition of the significant contribution that the States will be making under these agreements would be authorized, out of appropriated funds, to make grants of up to one-half of the cost of the programs undertaken by the States.

Any such agreement with a State could be terminated by the Secretary if, after notice and opportunity for hearing, he finds that the State has failed to comply with any provision of the agreement.

To provide the Secretary with additional expert counsel on his proposed safety standards, both bills authorize the creation of a technical pipeline safety standards committee. Composed of experts representing the various interested segments of the population the committee would offer a knowledgeable body to consult with the Secretary on technical

matters. Quite properly the role of this group is restricted to commenting on technical feasibility of proposed standards and their conclusions are not binding on the Secretary. In the final analysis, it is the Secretary who bears the responsibility for establishing sound and workable safety standards.

There are several deficiencies in S. 1166 about which I would like to comment. S. 1166, as passed by the Senate, does not contain criminal sanctions. It does provide for injunction and civil penalties. I think you gentlemen are familiar with the arguments for the proposition that civil penalties and injunctive relief alone provide adequate deterrents to violation of a statute.

I do not share that view. I believe the life, health, and safety of millions of Americans cannot be willfully and knowingly be jeopardized by a violation of these standards by an unconscionable few. I believe there must be criminal penalties in this measure as an added deterrent to those few who may knowingly and willfully violate conditions of this Act.

Let me make it clear that no one in this Administration is seeking to cast a stigma on the thousands of men and women who manage and who are employed in the gas industry. But every large class of individuals contains a few who are willing to take shortcuts, even though this can result in serious injury or death. I believe that criminal penalties can provide far greater protection against such individuals.

What may be called a partial exemption from retroactive application of standards is contained in S. 1166; there is no similar provision in H. R. 13936. This provision relates to the fears expressed by the industry that it might be forced to bear the expense of replacing large quantities of existing pipeline for no reason other than that they do not comply with a subsequently enacted standard, irrespective of whether the pipe is sound and safe. This fear is necessarily based on an assumption that the Department would or could implement this legislation in an impetuous or unreasonable fashion. I think it is entirely unreasonable to assume that any Secretary of Transportation would act to require the industry to expend great sums of money without reference to whether such actions would improve safety.

I believe that this section of S. 1166 is unnecessary. I believe that the Bill contains adequate restraints on the authority of the Secretary in establishing standards. The Bill specified that his standards must be "practicable and designed to meet the needs for pipeline safety."

The Act also imposes on the Secretary the obligation to consider the following criteria:

- (1) relevant available pipeline safety data;
- (2) whether such standards are appropriate for the particular type of pipeline transportation;
- (3) the reasonableness of any proposed standards; and
- (4) the extent to which such standards will contribute to public safety.

In addition the Secretary will be bound by all procedural requirements of the Administrative Procedure Act. He will have the advice and recommendations of the Technical Advisory Committee in which two-thirds of the membership will represent the public. Finally, every standard issued by the Secretary, whether prospective or retroactive, is subject to judicial review.

For these reasons I would urge that this provision in Section 3(b) be stricken from S. 1166.

There are two aspects of the administration of both S. 1166 and H. R. 13936 which are, in our judgment, in need of improvement. I indicate elsewhere in this statement that the Technical Advisory Committee will serve a useful role in administering pipeline safety under this law. However, I consider the requirement that the Secretary must publish his reasons for any rejection of a Committee recommendation to be an unreasonable administrative burden. I am not aware of any other similar situation imposing this burden on a Federal safety administrator. Such justification is not required in relation to the work of the advisory committees under either the Traffic or Highway Safety Acts which we administer. The recently passed flammable fabrics amendments do not impose this burden on the administrator and I am unaware of anything requiring a unique treatment of the recommendations of the pipeline safety advisory committee envisioned by this bill.

In my opinion, it is important for any statute which creates grants-inaid to States for public safety activities to contain a provision requiring maintenance of a minimum level of financial effort from state sources. In other words, we want to obviate any possibility that a State will substitute the Federal grant funds for state funds it may have been spending on establishing and enforcing pipeline safety. We want to foster an expanding effort; the bill should provide, as a prerequisite to receiving a grant, that a state's financial effort may not fall below its previous expenditures. I shall furnish the Committee with language to accomplish this.

In summary I believe that, among the bills before you, S. 1166 is a preferable item with the following amendments:

- 1. Striking of that section which requires Secretarial publication of his reason for rejecting a recommendation of the Technical Advisory Committee.
- 2. Language which would clarify that the grants-in-aid provided to the states could not be substituted for funds already being spent by the states for the establishment and enforcement of gas pipeline safety regulations.
- 3. Inclusion of criminal sanctions in addition to the civil penalties and injunctions now in the bill.
- 4. Removal of the partial exemption from retroactive application of standards.

I urge that this committee take prompt action to report this bill to the House of Representatives. The need for authority to establish Federal gas pipeline safety standards is clear. You have before you the vehicle by which to authorize the establishment of such standards in a fair, informed and effective manner which will be another step toward the ultimate goal of providing Americans with the safest possible transportation system.

APPENDIX TO STATEMENT OF ALAN S. BOYD, SECRETARY OF TRANSPORTATION

Some of the major areas where the USASI B31.8 Code does not provide the safety standards essential for gas pipeline systems:

- 1. The Code does not provide for a systematic testing or evaluation of pipe already in the ground.
- 2. The Code does not require a pressure test for all upgrading of pipeline systems.
- 3. The Code mentions use of varying types of construction materials to be used in cold climates, but offers no positive specifications to insure materials with special properties are used.
- 4. The Code does not require uniform marking of the exact location of lines.
- 5. The Code does not define welding inspection procedures; specifically, the frequency of inspection of welds by radiographic methods.
- 6. The Code does not specify uniform construction specifications for new pipeline.
- 7. The Code requires that companies have a plan for pipeline maintenance, but it does not specify the extent, thoroughness, or any specific points of such a plan.
- 8. The Code establishes design factor requirements for pipeline according to location. In rural areas, the Code limits the operating pressure to 72% of the design stress. In urban areas, the Code limits the operating pressure to 40% of the design stress, i. e., giving a greater safety factor.

It does not provide a method for changing these requirements as population density changes. Consequently, we now have suburban homes, office buildings and shopping centers in close proximity to pipelines originally designed to operate at a higher percent of design stress.

- 9. The Code does not give inspection procedures during construction for each type of pipeline.
- 10. The procedures for revision of the Code are extremely time consuming. The time required for a revision can be two years or more. This time lag is too great when the public safety is concerned.

PRINCIPAL FEATURES OF VARIOUS GAS PIPELINE SAFETY BILLS AS INTRODUCED IN SENATE AND AS NOW PENDING IN THE HOUSE

(90th Congress, First Session)

_	Provisions	S. 1166 (as introduced March 3, 1967)	S. 1166 (as passed by Senate, Nov. 9, 1967)	H.R. 13936	н. к. 6551
1.	Scope of the Bill	 a. Public, private or cooperatively owned pipelines and appurtenant facilities b. gathering, distribution, and transmission c. natural or artificial gas d. in interstate or foreign commerce e. covers design, installation, inspection, testing, construction, extension, operation, replacement and maintenance 	 a. Applies to the "transportation of gas and pipeline facilities" b. gathering, transmission and distribution c. natural gas, flammable gas, or non-flammable hazardous gas d. in or affecting interstate or foreign commerce e. covers design, installation, inspection, testing, construction, extension, operation, replacement and maintenance 	With some language dif- ferences, sub- stance is the same as S. 1166, as passed by Senate.	 a. Pipeline transportation facilities of natural gas companies b. applies to those companies under economic jurisdiction of the Federal Power Commission, i.e., about 150,000 miles of transmission lines c. covers natural gas d. in interstate or foreign commerce e. covers construction, extension, operation, and maintenance
2.	Responsible Agency	Secretary of Transportation	Secretary of Transportation	Secretary of Transportation	Federal Power Commission
3.	Standard Setting	Secretary would "formulate regulations" for safe transportation by pipeline; make changes or modification, on his own motion or that of an interested party; to become effective ninety days after publication, unless a shorter time specified. (Per 18 U.S.C. 834)	Not later than 24 months after enactment, Secretary shall establish minimum Federal safety standards for the transportation of gas and pipeline facilities; to become effective 30 days from issuance unless a different time is established for good cause; standards are to be "practicable and designed to meet the need for pipeline safety"; Secretary is to consider (1) relevant data, (2) appropriateness of a standard for the type of pipeline, (3) reasonableness, (4) the extent to which a standard will contribute to safety.	Same as S. 1166, as passed by Senate.	Commission authorized to prescribe such standards, rules, regulations, restrictions, conditions, or orders as, in its opinion, are necessary for the promotion of safety

_	Provisions	S. 1166 (as introduced March 3, 1967)	S. 1166 (as passed by Senate, Nov. 9, 1967)	н. R. 13936	н. к. 6551	
4.	Interim Standards	No provision.	No later than 3 months after enactment, Secretary shall adopt as interim minimum Federal standards standards in effect in a State, or apply standards in effect in a majority of States to those States having no standards.	Substantially the same as S. 1166, as passed by Senate.	No provision.	
5.	Procedures for Standards	None specified but rule making (Sec. 4 of APA) is followed.	Sec. 4 rule making (no adjudicatory hearing required); however, except for interim standards, the opportunity for oral presentation of witnesses and argument will be afforded interested persons.	Same as S. 1166, as passed by Senate.	Not specified.	
6	Preemption	Would not prohibit States from establishing additional regulations not inconsistent with Federal Regulations	States may adopt additional and more stringent standards for gathering, distribution, and intrastate transmission as are not inconsistent with Federal standards. Complete Federal preemption as to interstate transmission lines.	States or municipalities may adopt additional or more stringent standards, not inconsistent with Federal standards, for gathering, distribution, and intrastate transmission. Complete Federal preemption as to interstate transmission lines.	Not specified whether F.P.C. action would preempt State action.	

Provisions	S. 1166 (as introduced March 3, 1967)	S. 1166 (as passed by Senate, Nov. 9, 1967)	H.R. 13936	H.R. 6551
7. Retroactive Applicability	No provision; presumably regulations would apply to existing installations as well as having prospective application.	Standards affecting design, installation, construction, initial testing and initial inspection not applicable to facilities in existence on the date such standards are adopted, unless the Secretary finds that a potentially hazardous situation exists.	No provision; presumably any standard would have complete retroactive application.	No provision.
8. Civil Penalties	None.	\$1,000 for each violation of a standard or implementing regulation for each day the violation persists up to \$400,000 for a related series of violations.	Same as S. 1166, as passed by the Senate.	None.
9. Criminal Penalties	\$1,000 fine for knowingly violating any regulation, or imprisonment for up to one year, or both; if death or bodily injury results from violation, \$10,000 fine, or up to ten years imprisonment, or both.	No criminal penalty.	Knowing or will- ful violation of a standard or implementing regulation punishable by a fine of up to \$50,000, or imprisonment for up to one year, or both.	Knowingly and willfully doing anything made unlawful under Natural Gas Act (which H.R. 6551 would amend) punishable by fine of up to \$5,000, imprisonment for up to two years, or both; knowing and willful violation of a rule, regulation, restriction, condition or order of the Commission punishable by fine of up to \$500 for each day such offense occurs.
10. Injunction	No specific provision.	Secretary may obtain injunction "to restrain violations of the Act (including the restraint of transportation of gas or the operation of a pipeline facility) or to enforce standards"	Substantially the same as S. 1166, as passed by the Senate.	Injunctive relief available.

a program designed to achieve

compliance.

13. Interagency Cooperation

Provisions

Nothing in Act to be deemed to restrict FPC authority under the Natural Gas Act; Secretary to advise the FPC on certain technical matters within his knowledge; opportunity to be given FPC to grant necessary authorizations (relative to certificates of public convenience and necessity) where action on a regulation or a waiver would affect contimuity of service of a company under FPC jurisdiction.

b. Where a State cannot give all of the assurances required above, it may still enter into an agreement to assume responsibility for reporting and record-keeping functions and inspections with the understanding that any violations the State uncovers will be promptly reported to the Secretary.

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General authority to Secretary to cooperate with FPC, other Federal and State agencies; when action on a standard or waiver would affect continuity of service, the Secretary is to consult with and advise the FPC or State commission having jurisdiction and defer effective date until reasonable opportunity for granting necessary authorizations; in proceedings under section 7 of Natural Gas Act (licensing), the certification of an applicant that it will comply with the Secretary's safety standards is binding on FPC unless the relevant (State or Federal) enforcement agency notifies FPC that the applicant has violated the standards.

Substantially the same as S. 1166, as passed by the Senate. No provision.

	Provisions	S. 1166 (as introduced March 3, 1967)	(as passed by Senate, Nov. 9, 1967)	н. R. 13936	н. R. 6551
14.	Appropriations	No authorization or appropriation language (presumably the cost of administering the Act would be built into the DOT appropriation annually).	FY 1969, \$10,000,000; FY 1970, \$13,000,000; FY 1971, \$15,000,000 authorizations.	Such amounts as may be necessary to carry out the provisions of the Act would be authorized.	No special authorization.
15.	Grants-in-Aid	No provision.	 a. Out of appropriated funds, the Secretary may pay up to 50 percent of a State's cost of establishing and enforcing standards where it is engaged in such activities pursuant to agreement with the Secretary (see item 12 above) provided State applies for same and has provided for the other 50 percent of costs. b. Annual grant of \$20,000 to National Association of Railroads and Utilities Commissioners to coordinate State activities and promote safety. 	Substantially the same as S. 1166, as passed by the Senate	No provision.
16.	Fee System	No provision.	To help defray the expenses of Federal inspection and enforcement, the Secretary may require the payment of a reasonable annual fee to him by all persons transporting gas.	Substantially the same as S. 1166, as passed by the Senate	No provision.